

25X1X7

PERFORMANCE ESTIMATE FOR SOVIET JET HEAVY BOMBER

I.  estimates of performance as of 1957 for the

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Soviet Type 37 Heavy Jet Bomber have been finalized.

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	<u>Optimum Radius/Range</u> <u>Mission</u>
Take off weight (pounds)	345,000
Bomb load (pounds)*	10,000
Combat radius (N miles)	2,600
Combat range (N miles)	5,100
Target altitude (feet)	43,700
Maximum targets speed (knots)	487

II. Estimated optimum mission performances with 10,000 lb.

bomb loads (multi-megaton weapons) are such that without  
utilizing forward staging bases (Chukotski) and range  
extension techniques e.g. in-flight refueling or one-way  
missions, the Type 37 represents a striking power still  
generally oriented toward Europe, Asia, and peripheral

areas. Thus, the full measure of threat posed by the

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Type 37 depends upon

- a. as as yet undemonstrated in-flight refueling capability requiring 18 months to 2 years to develop and
- b. a Soviet decision to expend in 1957 all 50 estimated operational Type 37 aircraft on missions with the expectation that only half might reach assigned targets.

III. In the aggregate, the mid-1957 picture would appear to be one in which the TU-4 would still figure prominently, with the Type 39 a strong element of strength against Eurasian and peripheral targets, and the Type 37 just coming into significant quantity. Given Soviet nuclear capabilities, this is a serious and formidable picture, but it is not particularly alarming with respect to the continental US. However, with series Type 37 production, operational staging bases, and an effective in-flight refueling system, the threat increases sharply becoming

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very grave by 1958 and 1959.

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## Background

### BOMB LOAD VARIATIONS

By decreasing the bomb load from ten thousand to three thousand pounds and increasing the fuel load accordingly, the combat radius/range of the Type 37 may be extended slightly. However, nuclear ordnance weighing 3,000 lb. would be a marginally acceptable strategic weapon. If effectively constructed, a 3,000 lb. weapon could yield an energy equivalent of approximately 20KT--the yield of the Nagasaki bomb. By extravagant, inefficient use of nuclear material this yield could be boosted. Such uneconomical use of nuclear material appears unlikely as the Soviet stockpile of nuclear material in 1957 will still be relatively modest.

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**Background**

**Comparison of the Basic Missions of the Type 39 and US B-52**

		US B-52
<b>Take off weight (pounds)</b>	<b>345,000</b>	<b>390,000</b>
<b>Bomb load (pounds)</b>	<b>10,000</b>	<b>10,000</b>
<b>Combat radius (NM)</b>	<b>2,350</b>	<b>3,160</b>
<b>Combat range (NM)</b>	<b>4,360</b>	<b>6,560</b>
<b>Target altitude (feet)</b>	<b>41,200</b>	<b>46,700</b>
<b>Maximum Target speed (knots)</b>	<b>492</b>	<b>480</b>